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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,464	12/13/2000	Thorsten Laux	P-4589	9684

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EXAMINER	
ZHEN, LI B	

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/738,464	LAUX, THORSTEN	
	Examiner	Art Unit	
	Li B. Zhen	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 are pending in the current application.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 6 – 10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 6 – 10 are not limited to ~~tangible~~ statutory embodiments. In view of Applicant's disclosure, specification page 14, lines 6 – 13, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., CD-ROM discs, ROM cards, floppy discs, magnetic tapes, computer hard drives) and intangible embodiments (e.g., signals transmitted over a network representing computer readable program code). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,903,890 to Shoji et al. [hereinafter referred to as Shoji] in**

view of U.S. Patent No. 6,523,028 to DiDomizio et al. [hereinafter referred to as DiDomizio], both references cited in the previous office action.

6. As to claim 11, Shoji teaches the invention substantially as claimed including a system comprising:

a plurality of data sources [databases 704 – 706, Fig. 1; col. 4, lines 18 – 35];

a driver for each data source in the plurality of data sources [drivers 712 – 714, Fig. 1; col. 4, lines 47 – 64] thereby forming a plurality of drivers wherein each driver has a substantially identical driver application programming interface [database system of the present invention comprises a plurality of database drivers which are hierarchically equal. This structure is compatible with the digital cell technology. In this embodiment, the database and interface drivers could be implemented as cells; col. 2, lines 43 – 56]; and

a merging driver coupled to each driver in the plurality of drivers through the driver application programming interface [interface driver 720, Fig. 1; col. 5, lines 44 – 60], wherein the merging driver distributes queries to each driver in said plurality of drivers so that the queries are directed to each of said plurality of data sources [user can then click on one of the logic relationships shown in a window 778 to select a search for the results of all the databases; col. 5, lines 45 – 60].

7. Although Shoji teaches the invention substantially as claimed, Shoji does not specifically teach distributing a single query to each driver in the plurality of drivers so that single query is directed to each of the plurality of data sources.

However, DiDomizio teaches a system for processing at least a first query to retrieve data relevant to the first query from at least a first of a plurality of distributed or target databases [col. 5, lines 49 – 67] wherein a single query is distributed to each driver in the plurality of drivers [examiner notes that it is obvious that each database has an associated driver so that applications can access the data stored in the database, i.e. see col. 4, lines 47 – 64 of Shoji] so that single query is directed to each of the plurality of data sources [step 128 of searching the database structure (e.g., LDAP

structure) to retrieve all attributes in the target databases that match the terms of the enhanced query selected by the user; col. 9, line 57 – col. 10, line 23].

8. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of distributing a single query to each driver in the plurality of drivers so that single query is directed to each of the plurality of data sources as taught by DiDomizio to the invention of Shoji because this aid users in accessing data from distributed, structured databases, whereby users need not know the structure or existence of relevant data sources currently available in the system and users need not understand the schema of the databases, need not know SQL, and are not limited to formatting queries using drop-down menus [col. 11, lines 37 - 52 of DiDomizio].

9. As to claim 12, Shoji as modified teaches one data source in the plurality of data sources is a merging data source [Database system 700 contains a plurality of single-association databases, such as databases 704-706; col. 4, lines 18 – 35 of Shoji].

10. As to claim 1, Shoji as modified teaches a method for enabling access of a plurality of data sources by a single access operation wherein each data source in the plurality of data sources requires a separate driver to access the data source so that there is a plurality of separate drivers, the method comprising:

using an API for each driver in the plurality of separate drivers [drivers 712 – 714, Fig. 1; col. 4, lines 47 – 64 of Shoji], wherein the API is substantially identical for each of the drivers in the plurality of separate drivers [col. 2, lines 43 – 56 of Shoji]; and

receiving the single access operation by a merging driver wherein in response to the single access operation [col. 5, lines 49 – 67 of DiDomizio], the merging driver accesses each driver in the plurality of separate drivers through the API [drivers 712 – 714, Fig. 1; col. 4, lines 47 – 64 of Shoji]; and

accessing an associated data source in said plurality of data sources by said each driver in response to said merging driver access though said API [step 128 of searching the database structure (e.g., LDAP structure) to retrieve all attributes in the

target databases that match the terms of the enhanced query selected by the user; col. 9, line 57 – col. 10, line 23 of DiDomizio];

wherein said single access operation enabled access of said plurality of data sources [user may select tables from the left-hand area 72 of the query generating screen 70; col. 9, lines 23 – 57 of DiDomizio]; and

said single access operation is performed for each of said plurality of data sources [searching the database structure to retrieve all attributes in the target databases that match the terms of the enhanced query selected by the user; col. 9, line 57 – col. 10, line 23 of DiDomizio].

11. As to claim 2, Shoji as modified teaches receiving from a user a selection of each data source to be included in the plurality of data sources [user may select tables from the left-hand area 72 of the query generating screen 70; col. 9, lines 23 – 57 of DiDomizio].

12. As to claim 3, Shoji as modified teaches a data source in the plurality of data sources that is a merging data source [Database system 700 contains a plurality of single-association databases, such as databases 704-706; col. 4, lines 18 – 35 of Shoji].

13. As to claim 4, Shoji as modified teaches obtaining an ordered result in response to the single access operation [col. 11, lines 28 – 40 of Shoji].

14. As to claim 5, Shoji as modified teaches accessing the merging driver through the API [graphic display 740, Fig. 2A; col. 4, line 64 – col. 5, line 21 of Shoji].

15. As to claims 6 – 10, these are product claims that correspond to method claims 1 – 5; note the rejections to claims 1 – 5 above, which also meet these product claims.

16. As to claims 13 – 17, these are system claims that correspond to method claims 1 – 5; note the rejections to claims 1 – 5 above, which also meet these system claims. As to the additional limitations, Shoji as modified teaches a processor [CPU 604, Fig. 8; col. 15, lines 20 – 35 of Shoji] and a memory coupled to the processor [system memory 606, Fig. 8; col. 15, lines 20 – 35 of Shoji].

Response to Arguments

17. Applicant's arguments, see p. 2, line 5 – p. 4, line 18, filed 10/17/2005, with respect to the 35 U.S.C. 101 rejection for claims 1 - 5 have been fully considered and are persuasive. The 35 U.S.C. 101 rejection of 1 - 5 has been withdrawn.

18. Applicant's arguments filed 10/17/2005 with regards to the 35 U.S.C. 101 rejection for claims 6 – 10 and the 35 U.S.C. 103(a) rejection for claims 1 – 17 have been fully considered but they are not fully persuasive. Claims 6 – 10 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter [see the 35 U.S.C. 101 rejection above]. In response to the 35 U.S.C. 103(a) rejection, applicant argues:

(1) Shoji does not teach substantially identical APIs for each driver in the plurality of separate drivers [p. 9, lines 8 – 11];

(2) Shoji teaches away from applicant's invention Shoji teaches that the database drivers are hierarchically equal. Applicant's system as recited in claim 1 accommodate any driver schema with the API and did so without the restriction of hierarchical equality mandated in Shoji [p. 9, lines 11 – 21]; and

(3) The cited section of DiDomizio taught nothing about the single access operation as recited in claim 1; taught nothing about a merging driver as recited in claim 1; taught nothing about receiving the single access operating by the merging driver as recited in claim 1; and taught nothing about the merging driver accessing each driver, as recited in claim 1 [p. 10, lines 11 – 18].

In response the argument (1), examiner respectfully disagrees and notes that Shoji teaches substantially identical APIs for each driver. Examiner notes that the

phrase "substantially identical APIs" is taken to mean "each [API] appears the same to merging driver 125" [p. 6, lines 13 – 15 of the specification]. Shoji teaches that each database driver provides the same functions for its associated database [i.e. main function of the database driver is to perform searches on its associated database and return the results of the searches; col. 4, lines 47 – 54]. Since each database driver implements the same functions for its associated database, the APIs for each driver will also have the same functions calls and each API will appear the same to the merging driver [interface driver 720, Fig. 1; col. 5, lines 44 – 60 of Shoji]. Therefore, Shoji teaches substantially identical APIs for each driver.

As to argument (2), examiner respectfully disagrees and notes that applicant's invention as claimed does not preclude hierarchically equal database drivers. As to applicant's submission that Applicant's system as recited in claim 1 accommodate any driver schema with the API and did so without the restriction of hierarchical equality, examiner notes that this feature is not recited in any of the claims and does not appear to be disclosed in the applicant's specification.

In response to argument (3), examiner respectfully disagrees and notes that examiner relied on the DiDomizio reference to teach a first query to retrieve data from a plurality of distributed or target databases wherein a single query is distributed to each driver in the plurality of drivers so that single query is directed to each of the plurality of data sources. Shoji teaches a plurality of data sources [databases 704 – 706, Fig. 1; col. 4, lines 18 – 35], a driver for each data source [drivers 712 – 714, Fig. 1; col. 4, lines 47 – 64], each driver with a substantially identical driver application programming interface [col. 2, lines 43 – 56], a merging driver coupled to each driver in the plurality of drivers through the driver application programming interface [interface driver 720, Fig. 1; col. 5, lines 44 – 60], wherein the merging driver distributes queries to each driver in said plurality of drivers so that the queries are directed to each of said plurality of data sources [user can then click on one of the logic relationships shown in a window 778 to select a search for the results of all the databases; col. 5, lines 45 – 60]. Clearly, Shoji teaches a capability to submit a search for all of the databases. In addition, DiDomizio teaches a single query is distributed to each driver in the plurality of drivers so that

single query is directed to each of the plurality of data sources [step 128 of searching the database structure (e.g., LDAP structure) to retrieve all attributes in the target databases that match the terms of the enhanced query selected by the user; col. 9, line 57 – col. 10, line 23]. In the response applicant referred to col. 5, lines 49 – 57 of DiDomizio but did not address examiner's mapping to col. 9, line 57 – col. 10, line 23 of DiDomizio. The cited section [col. 9, line 57 – col. 10, line 23] discloses receiving a user query [step 112, col. 9, lines 60 – 63] and searching the database structure to retrieve all attributes in the target databases that match the terms of the enhanced query selected by the user [step 128, col. 10, lines 7 – 23]. The user query is a single access operation that is directed to each of the plurality of data sources. Therefore, the combination of Shoji and DiDomizio teaches applicant's invention as claimed and the motivation for combining the two references can be found on col. 11, lines 37 – 52 of the DiDomizio reference.

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

CONTACT INFORMATION

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
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lbz

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SUPERVISORY PATENT EXAMINER